

schedule (e.g., frequency of night shifts, duration in years) are needed. Further, research to the (mediating) role of lifestyle behaviours in the health effects of shift work is recommended, as this may offer potential for preventive strategies.

1617e WORKLOAD AND EARLY FUNCTIONAL AGEING AMONG HOSPITAL WORKERS

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Introduction Early functional ageing – EFA is the progressive work ability – WA impairment preceding the chronological ageing. Hospital work is characterised by physical and mental workloads arising from work stressors that can influence functional ageing. The aim of this follow-up study was to assess the association between psychosocial work stressors and functional ageing in a group of Brazilian hospital employees.

Methods This is a 3 year follow-up (2009–2012) study of 423 hospital workers of São Paulo, Brazil. We included only workers with excellent/good WA at the baseline. At baseline workers filled a form on sociodemographic, lifestyle, and occupational questions including the Brazilian versions of Job Stress Scale, Effort-Reward Questionnaire, Work-Related Activities That May Contribute To Job-Related Pain and/or Injury, and Work Ability Index. Moderate/poor WA were considered as EFA. Changes from excellent/good to moderate/poor WA were the dependent variable. We used logistic regression models adjusted for potential confounders.

Results The average age was 36.0 y (SD=8.3), 30.7% were over 40 y, 72.1% were females. At the end of follow-up the exposure to work stressors had worsened: job strain (20.3%), social support (22.7%), effort-reward imbalance (18.7%), over-commitment (18.4%) and Work-Related Activities That May Contribute To Job-Related Pain and/or Injury (13.9%). Eighteen percent of the workers shifted to moderate or poor WA. High levels of exposure to psychosocial work stressors were significantly associated with decreased work ability: job strain (OR=2.81) and effort-reward imbalance (OR=3.21).

Discussion Work stressors were risk factors for work ability. The results showed the need for interventions to maintain hospital employees' work ability. Such strategies have implications for institutional and social policies to prevent early functional ageing.

1617f COPING WITH SHIFTWORK: INDIVIDUAL AND TEAM STRATEGIES FOR HEALTH AND SAFETY

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Introduction Shiftwork can negatively impact on performance, safety and health. Importantly, while some shiftworkers are profoundly affected, others cope very well. The aim of this project was to identify healthy shiftworkers (across measures of physical, behavioural and psychosocial health) in a group

of Australian nurses and midwives, and to examine factors that may contribute to health across working life.

Methods This was a mixed methods study, combining survey, interview and biological measurements. Participating hospital nurses and midwives (n=96, f=85, age=44.3±12.6 y, shift-work experience=18.9±12.7 y) completed the Standard Shift-work Index, which includes measures of health, social, domestic and work disruption, and coping styles. Participants could also participate in an interview (n=22), and/or provide a saliva sample (n=45), to measure telomere length (if our DNA were shoelaces, telomeres would be the aglets).

Results Cluster analysis revealed a 'Healthier' and a 'Less Healthy' cluster, with significantly worse scores across all health variables (p<0.05). Controlling for gender, age and work hours, the odds of being 'Less Healthy' were significantly (p<0.05): reduced for experienced shiftworkers (≥20 y versus <20 y, OR=0.16); reduced by engaged coping style (OR=0.92); and increased by disengaged coping style (OR=1.20). Strategies for coping were aimed at promoting wakefulness/sleep at biologically difficult times, sustaining safe performance at work and while driving, and maintaining healthy diet, exercise and relationships. Strategies included the use of stimulants and sedatives, changes in composition/timing of food intake, changes in timing/distribution of sleep, advances/delays in undertaking safety-critical activities, and contributing to a culture of social support. Correlations between age and telomere length were negative in less experienced (<20 y, r=-0.22) and positive in more experienced (≥20 y, r=0.85) shiftworkers.

Conclusion Findings provided evidence of healthy ageing in experienced shiftworkers that was linked to coping style. Studying those who cope well provides an evidence-base for teaching successful behavioural strategies to improve worker health and safety.

1617g ASSOCIATION OF INSOMNIA AND FATIGUE DUE TO SHIFT WORK IN MIDLIFE AND MOBILITY LIMITATIONS OVER 28 YEARS OF FOLLOW-UP

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Objectives We aimed to investigate the long-term association of insomnia and fatigue due to shift work (with and without night shifts) in midlife and mobility limitations (ML) among initially middle-aged subjects followed over 28 years.

Methods The Finnish Longitudinal Study on Ageing Municipal Employees (FLAME) was conducted by the Finnish Institute of Occupational Health from 1981 to 2009 among 6257 municipal workers. This study is based on the latest available response on ML questionnaires either from 1992 or 1997 or in 2009 (n=4704). International Classification of Functioning (ICF) was used to code the nine mobility tasks included in the ML. Insomnia and fatigue due to shift work were assessed using the yes/no questions in the baseline. The Incidence Rate Ratio (IRR) and 95% Confidence Interval (CI) for the association of insomnia and fatigue due to shift work and ML were assessed by using mixed Poisson regression. The results are presented separately for women and men in shift work with and without night shifts.